

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## What Are Dominant and Recessive Traits?: *Reinforcement Activity*

**To the student observer:** Based on what you have learned, can you explain why Zach's hair is dark like his mother's and not blond like his father's?

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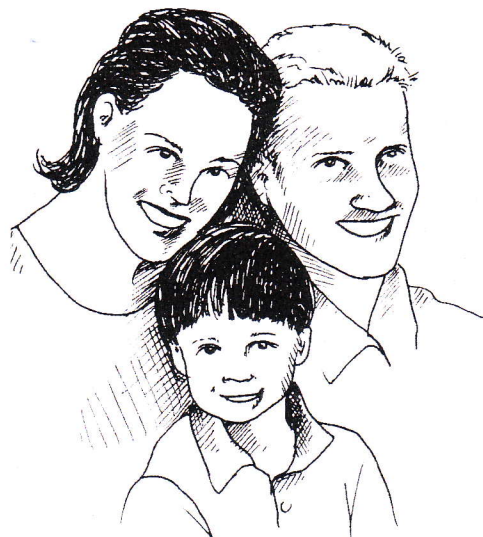
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**Analyze:** What is the difference between a pure tall plant and a hybrid tall plant?

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**Directions:** Complete the following sentences.

1. The gene that always shows itself is called the \_\_\_\_\_ gene.
2. All short pea plants have two \_\_\_\_\_ genes.
3. An organism with two like genes for a trait is called \_\_\_\_\_ for that trait.
4. Each trait an organism has is determined by one gene from \_\_\_\_\_ parent.
5. Most cells in our bodies have \_\_\_\_\_ alleles for every trait.
6. The "hidden" gene that does not show up is the \_\_\_\_\_ gene.
7. An organism with two alleles that are exactly the same for a certain trait is called \_\_\_\_\_.
8. An organism with two different alleles for a trait is called \_\_\_\_\_.

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## Dominant and Recessive Traits in Humans: Reinforcement Activity

Human genetics is very difficult to study, because the life span of humans is so long compared to the life span of other animals and plants. As a result, scientists cannot study all of the offspring produced in many generations of one family. Another difficulty in the study of human genetics is the number of offspring. Humans produce fewer offspring than other animals and plants. It is difficult to compare traits with fewer offspring to observe. Scientists use what they learn from studying other animals and plants to learn more about human genetics. How many of the traits in the table below do you recognize in yourself?



Dominant	Recessive
Brown eyes	Blue eyes
Curly hair	Straight hair
Freckles	No freckles
Nearsighted eyes	Normal eyes
Long eyelashes	Short eyelashes
Detached earlobes	Attached earlobes
Dimples	No dimples
Widow's peak hairline	Straight hairline



### Predicting Human Traits

**To the student observer:** Use the information in the table above to see if you can predict offspring traits in the chart below. The first example has been done for you.

Mother	Father	Offspring	Dominant/ Recessive	Hybrid/ Pure
1. normal eyesight	nearsighted	nearsighted	dominant	hybrid
2. straight hair	straight hair			
3. freckles	freckles			
4. long lashes	short lashes			
5. no dimples	dimples			
6. detached lobes	detached lobes			
7. blue eyes	brown eyes			
8. widow's peak	straight hairline			

**Analyze:** How many offspring will be pure dominant for a trait? Why do recessive genes show up? Answer on your own paper.